

SCIENTIFIC NOTE

**A RECORD OF THE ARCTIC FORESTFLY,
NEMOURA ARCTICA (PLECOPTERA: NEMOURIDAE),
FROM THE CONTIGUOUS UNITED STATES¹**B. C. Kondratieff² and R. W. Baumann³

The Nemourinae genus *Nemoura* Latreille currently includes a large number of recognized species primarily occurring in Europe and Asia (Baumann 1975, Harper 1975, Zwick and Sivec 1980, Shimizu 1997, Zhu and Yang 2003). Five species are known from North America, *N. arctica* Esben-Petersen, *N. normani* Ricker, *N. rickeri* Jewett, *N. spiniloba* Jewett, and *N. trispinosa* Claassen (Stark 2001). *Nemoura normani* is known from Alaska and the Northwest Territories; *N. rickeri* from Alaska, Manitoba, and Saskatchewan; *N. trispinosa* widespread over north central and northeastern North America; *N. spiniloba* is known from California; whereas, *N. arctica* is known from Eurasia and Western North America, having been recorded from the Canadian provinces of Alberta, British Columbia, Manitoba, Northwest Territories, Quebec, and in the U.S., Alaska (Stark 2001).

Nemoura arctica was originally described from Norway (Esben-Petersen 1910), and is considered a common species of streams and lakes in northern Europe (Lillehammer 1974b, Lillehammer 1988) and is recognized as a variable species in male and female terminalia structures (Lillehammer 1974a). Baumann et al. (1977) indicated that *N. arctica* had been collected only from two localities in the Rocky Mountains; Summit Lake, British Columbia, and Spearfish, South Dakota. However, the South Dakota records actually pertained to *N. trispinosa* (Sargent et al. 1999). Therefore, no record of this species has been published from the contiguous United States.

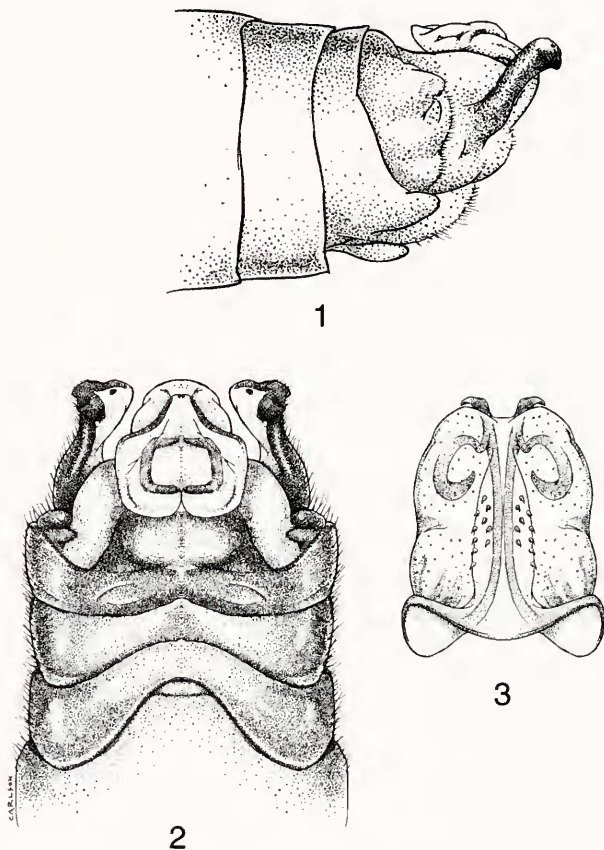
Almost eighteen years ago, the senior author collected a series of specimens of *N. arctica* from a lake in a high elevation alpine/subalpine wilderness in the Snowy Range of Wyoming. This area is located at 3,200 to 3,500 m elevation about 55 km west of Laramie, Wyoming. This area has developed from Quaternary and Holocene glaciation, with glacial cirque basins (Musselman 1992). An alpine lake dominates each watershed. Three other stoneflies are also known from the lakes; *Capnia confusa* (Claassen), *Malenka flexura* (Claassen), and *Podmosta delicatula* (Claassen).

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We provide figures of the epiproct and cerci from the Wyoming population for comparison with previously published figures by Koponen (1949), Brinck (1952), Zhiltzova (1972), Lillehammer (1974a, 1988). The epiproct structures of the Wyoming specimens (Figs. 1-3) agree with the variation as accepted by Lillehammer (1974a, especially Fig. 25f).



Figures 1-3 *Nemoura arctica*. 1. Male terminalia, lateral. 2. Male terminalia, dorsal. 3. Sclerotized structures of the epiproct, ventral.

Material Examined: Wyoming, Albany Co., West Glacier Lake, Medicine Bow National Forest, June 29, 1987, B. Kondratieff and B. Painter; 1 male, 2 females, same but July 21, 1987, 3 males, 17 females. Material is deposited in the C. P. Gillette Museum of Arthropod Diversity, Colorado State University, and Monte L. Bean Life Science Museum, Brigham Young University.

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